

## ABSTRACT

A multicolor halftone image apparatus of the present invention includes halftone plates of a plurality of colors for reproducing a colored image, and each halftone is tilted with a relative screen angular difference of 30 degrees or 45 degrees in relation to at least one of the remaining halftones. For the preparation of the multicolor halftone, on the basis of a predetermined screen angle of a specific halftone, halftone dots are disposed in the specific halftone at a predetermined pitch. For each of the remaining halftones, a right triangle is defined such that its vertical angle is equal to a screen angle difference of 30 degrees or 45 degrees which the halftone has in relation to another halftone, and its two sides forming the vertical angle corresponds to screen angle directions of the two halftones. The ratio of the three sides of the right triangle represented by numerical values including  $\sqrt{3}$  or  $\sqrt{2}$ , which is an irrational number, is represented by integral values which approximate values obtained by multiplying the numerical values by an integer. On the basis of the right triangle having a ratio approximated by the integral values, respective halftone dots of the two halftones are disposed at a pitch equal to the predetermined pitch along the screen angle directions of the two halftones corresponding to the two sides forming the vertical angle.